DRAINAGE PROJECTS

DRAINAGE PROJECTS

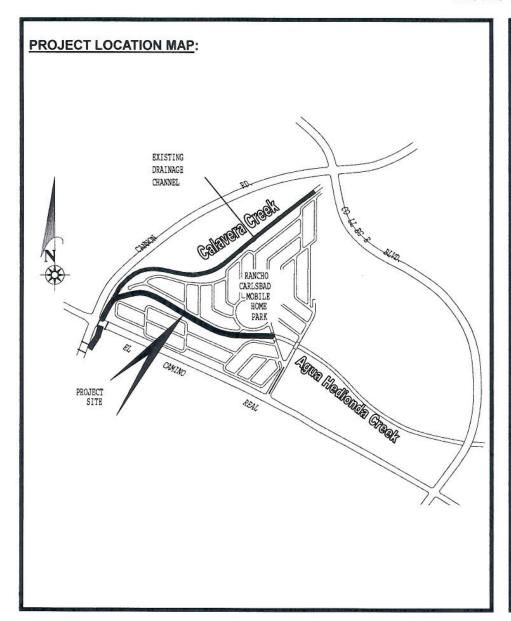
FUNDING MATRIX FOR DRAINAGE PROJECTS

					FUTURE YEAR BUDGET AMOUNTS						
PROJ	FUND		FUNDING	TOTAL	YEAR 1	YEAR 2	YEAR 3	YEAR 4	YEAR 5	YEAR 6-10	BUILDOUT
NO.	NO.	PROJECT TITLE	SOURCE	BUDGET	2008-09	2009-2010	2010-2011	2011-2012	2012-2013	2013-2018	2018-2023
3338	33381	AGUA HEDIONDA CHANNEL (PLDA "B")	PLD	1,896,522							
6605	66051	CALLE GAVANZO DRAINAGE	GCC	62,500							
6605	66052	CALLE GAVANZO DRAINAGE	GAS TAX	12,531							
3624	36241	CARLSBAD BLVD STORM DRAIN REPLACEMENT	IRF	218,000							
6607	66071	CMP REPLACEMENT PROGRAM	IRF	2,583,000	802,000	427,000	502,000	277,000			
		COLLEGE BLVD. BRIDGE FACILITY BL (REIMB./PLDA "B")	PLD	1,911,800						1,911,800	
3636	36363	COLLEGE BLVD/CANNON RD (BASIN BJB - REIMB./PLDA "B") (FEMA + PLD)	PLD	1,073,294							
3636	36363	COLLEGE BLVD/CANNON RD (BJ AND CALAVERA CR. CHANNEL)	PLD	2,536,449							
6601	66011	CYNTHIA LANE STORM DRAIN	IRF	253,750							
3622	36225	FARADAY/MELROSE DRAINAGE FACILITIES (PLDA "B")	PLD	325,000	25,000						
Ø		HOSP GROVE PARK DRAINAGE IMPROVEMENTS	IRF	150,000	150,000						
3306	66061	KELLY DRIVE CHANNEL REPAIR	IRF	1,158,500	36,000	682,500					
6602	66021	LA COSTA AVE STORM DRAIN REPLACEMENT	IRF	492,150							
3872	38721	MASTER PLAN UPDATE	PLD	494,933							
		MISCELLANEOUS MASTER DRAINAGE FACILITIES	PLD	11,318,800							11,318,800
3681	36811	MISCELLANEOUS ROAD SUBDRAINS	GAS TAX	560,000	75,000						
6608	66081	NW QUADRANT STORM DRAIN IMPROVEMENT PROGRAM	GCC	460,250	155,000						
		NW QUADRANT STORM DRAIN IMPROVEMENT PROGRAM	GAS TAX	2,862,094	406,055	397,573	415,898	694,228	948,340		
		PARK DRIVE AND TAMARACK AVENUE STORM DRAIN (PLDA "B")	PLD	631,400						631,400	
6603	66031	RIDGECREST DRAINAGE IMPROVEMENTS	GCC	117,500							
6604	66041	ROMERIA DRAINAGE IMPROVEMENTS	GCC	274,000							
		ROMERIA DRAINAGE IMPROVEMENTS	GAS TAX	338,000	338,000						
		TAMARACK AND ECR STORM DRAIN AND SILT. BASIN (REIMB./PLDA "B")	PLD	1,323,800							1,323,800

<u>DRAINAGE PROJECTS – AGUA HEDIONDA CHANNEL IMPROVEMENTS</u>

3338 PROJECT NO.

PROJECT NAME



PROJECT LOCATION:

Along the Agua Hedionda Creek Channel from the downstream edge of the Cannon Road bridge to approximately 3,100 feet upstream of the El Camino Real bridge.

PROJECT DESCRIPTION:

The proposed work includes dredging approximately 40,000 cubic yards of accumulated sediment from within the Agua Hedionda channel, widening and improvement of the channel at the confluence of the Agua Hedionda and Calavera Creeks, reconstruction of the bridge piers under El Camino Real to streamline flows and reduce potential blockages, stabilization of the Calavera Creek channel and mitigation work for the impacts associated with the channel improvement project. Further studies will determine the scope of the mitigation work and the construction costs associated with mitigation and construction. The project may also include removal of the weir wall at the confluence of Calavera Creek with Little Encinas Creek and modifications to the outlet structure at Basin BJB.

PROJECT NEED:

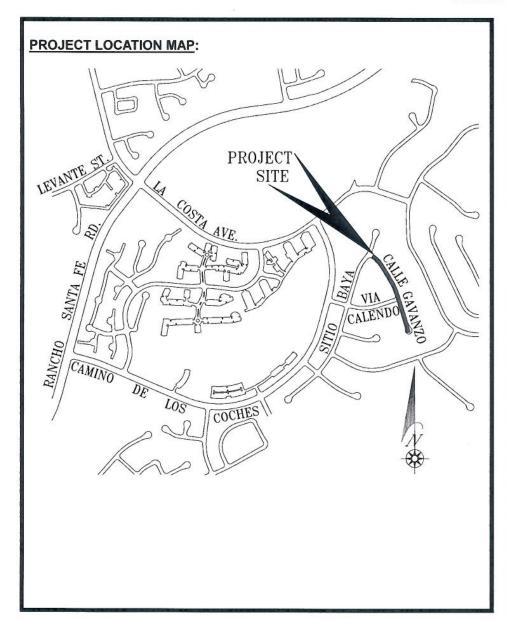
Required by the Drainage Master Plan to mitigate potential flooding impacts to the Rancho Carlsbad Mobile Home Park development.

Purpose	Estimated Cost	Funding Source
Studies/Design	\$1,896,522	PLDA "B" Fees
Total Cost =	\$1,896,522	

6605 PROJECT NO.

DRAINAGE PROJECTS - CALLE GAVANZO SUBSURFACE DRAINAGE IMPROVEMENT

PROJECT NAME



PROJECT LOCATION:

Calle Gavanzo Street.

PROJECT DESCRIPTION:

West side of Calle Gavanzo shows signs of a subsurface drainage problem. The problem causes continuous wet pavement on the west side of the street. The project will require installation of subsurface draining in the street and street surface repair.

PROJECT NEED:

The subsurface drainage problem causes pavement damage from continuous wet pavement. In addition, the pavement is slowly separating from the gutter. Local residents state drains were installed on the east side of the street in previous years.

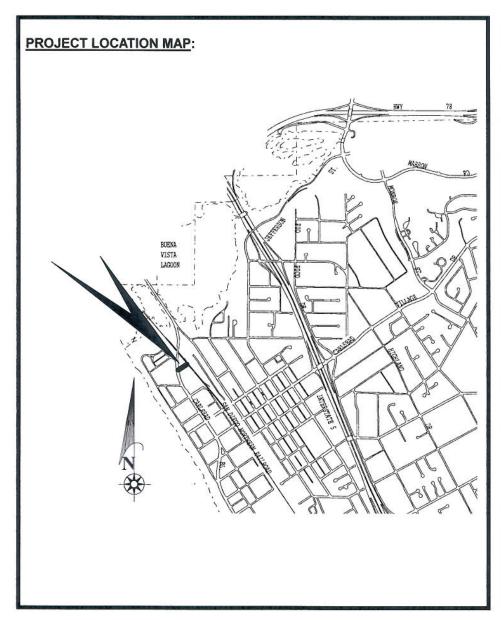
<u>Purpose</u>	Estimated Cost	Funding Source
Design	\$7,531	Gas Tax
Construction	\$62,500	GCC
Admin/Inspection	\$5,000	Gas Tax
Total Cost =	\$75,031	

3624

DRAINAGE PROJECTS - CARLSBAD BOULEVARD STORM DRAIN REPLACEMENT

PROJECT NO.

PROJECT NAME



PROJECT LOCATION:

From Carlsbad Boulevard to the San Diego Northern Railroad tracks just south of the railroad overcrossing.

PROJECT DESCRIPTION:

Relocate and replace approximately 350 feet of 18-inch corrugated metal storm drain pipe (CMP) with a reinforced concrete storm drain pipe. Project would include installation of new storm drain inlets and an outlet.

PROJECT NEED:

The existing CMP has corroded away and drainage water is now undermining the soil column above the pipe. Recently, a sinkhole developed which required extensive maintenance repairs. The pipe crosses private property along a previously vacated street right-of-way. At one point, the pipe runs beneath a private structure built many years ago over the vacated street. Replacing the pipe will reduce the potential of local flooding on Carlsbad Boulevard and/or damage to the structure above the pipe as well as additional maintenance repairs.

<u>Purpose</u>	Estimated Cost	Funding Source
Design	\$43,000	IRF
Construction	\$144,000	IRF
Admin/Inspection	\$31,000	IRF
Total Cost =	\$218,000	

<u>DRAINAGE PROJECTS – CMP REPLACEMENT PROGRAM</u>

PROJECT NO.

PROJECT NAME

PROJECT	LOCATION	MAP:

VARIOUS LOCATIONS THROUGHOUT THE CITY

PROJECT LOCATION:

Various locations throughout the City.

PROJECT DESCRIPTION:

Replace CMP storm drain pipelines in need of replacement based on a review of television condition surveys.

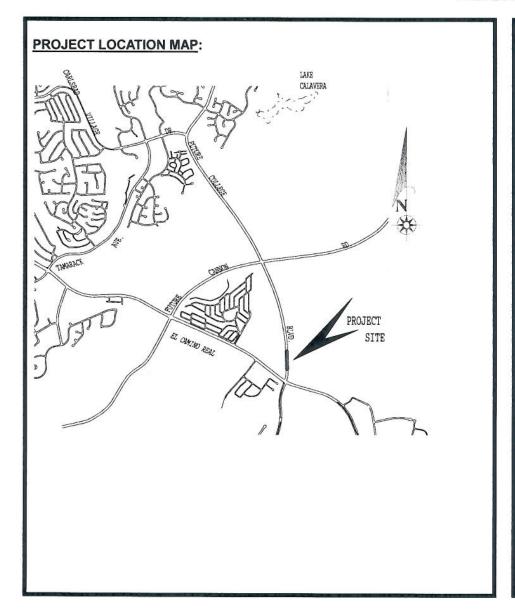
PROJECT NEED:

Replace CMP storm drain pipelines with RCP or slip lining at various locations throughout the City to proactively eliminate pipeline failures.

<u>Purpose</u>	Estimated Cost	Funding Source
Design	\$240,000	IRF
Environmental Review	\$50,000	IRF
Construction	\$2,293,000	IRF
Total Cost =	\$2,583,000	

DRAINAGE PROJECTS – COLLEGE BOULEVARD BRIDGE FACILITY PROJECT NAME

PROJECT NO.



PROJECT LOCATION:

At the College Boulevard crossing of the Agua Hedionda Creek.

PROJECT DESCRIPTION:

Construction of a bridge structure for the College Boulevard crossing of the Agua Hedionda Creek.

PROJECT NEED:

The project is needed to protect College Boulevard from flood damage.

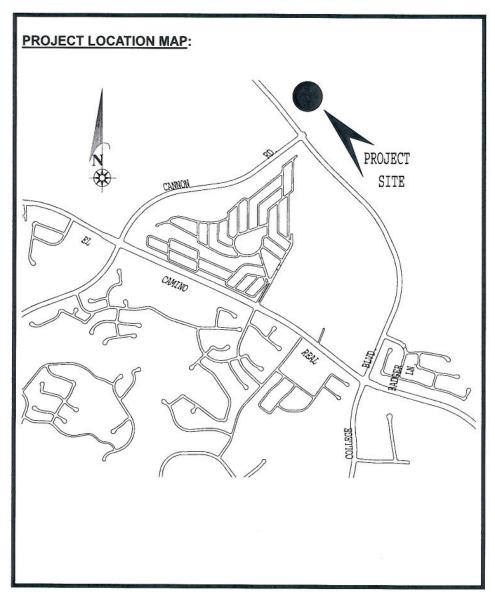
<u>Purpose</u>	Estimated Cost	Funding Source
Design/Construction	\$1,911,800	PLDA "B"
Total Cost =	\$1,911,800	

3636

DRAINAGE PROJECTS - COLLEGE BOULEVARD / CANNON ROAD (DRAINAGE BASIN BJB)

PROJECT NO.

PROJECT NAME



PROJECT LOCATION:

Within and adjacent to Calavera Creek located at the northeast corner of the Cannon Road and College Boulevard intersection.

PROJECT DESCRIPTION:

Construction of a 49 acre-foot drainage retention basin covering approximately 15 acres of land within and adjacent to Calavera Creek located northeast of the College Boulevard and Cannon Road intersection. The project includes construction of a 11-foot by 7-foot reinforced concrete box extending across the College Boulevard and Cannon Road intersection, a 72-inch low flow pipe draining the retention basin, a concrete spillway and rock slope protection.

PROJECT NEED:

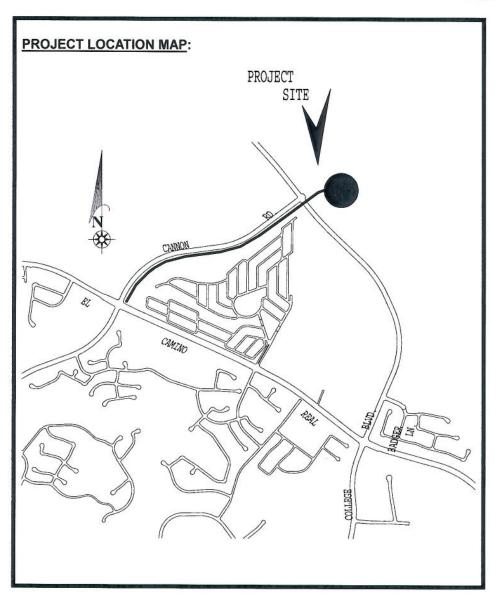
This project is one of a series of projects designed to help reduce flooding along the Agua Hedionda Creek especially within the RCMHP community. The series of projects include the construction of four floodwater retention basins, including Basin BJ, Basin BJB, the Melrose Drive Basin and the Faraday Avenue basin, and the dredging and/or improvement of the Agua Hedionda and Calavera Creek channels.

<u>Purpose</u>	Estimated Cost	Funding Source
Reimbursement Reimbursement	\$ 291,247 \$539,663	PLDA "B" Fed Grant
Total Cost =	\$1,073,294	

3636 PROJECT NO.

<u>DRAINAGE PROJECTS – COLLEGE BOULEVARD / CANNON ROAD</u> (CALAVERA CREEK CHANNEL AND DRAINAGE BASIN BJ)

PROJECT NAME



PROJECT LOCATION:

Along Calavera Creek from El Camino Real to future College Boulevard and within the Little Encinas Creek immediately east of the future College Boulevard.

PROJECT DESCRIPTION:

Construction of a 49 acre-foot drainage retention basin covering approximately 8 acres of land within and adjacent to the Little Encinas Creek located east of the future College Boulevard at the northeast corner of the Rancho Carlsbad Mobile Home Park (RCMHP). Included with the project is a reinforced concrete box culvert under future College Boulevard. Also included is an 84 inch storm drain pipe proposed along the north side of Cannon Road, designed to take overflow drainage from the Calavera Creek. The construction of the retention basin requires relocation of an existing RV storage lot, community garden and maintenance yard owned by the RCMHP property owners association. The proposed site of the relocated facility is north of the RCMHP and south of Cannon Road.

PROJECT NEED:

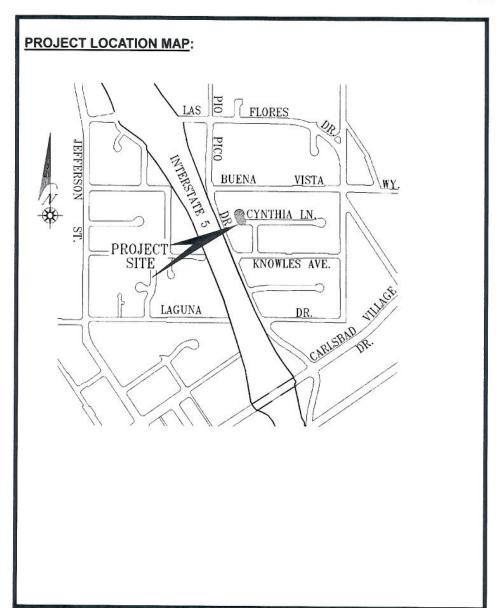
This project is one in a series of projects designed to help reduce flooding along the Agua Hedionda and Calavera Creeks primarily within the RCMHP community. The project also eliminates flooding of El Camino Real during a 100-year flood event. The series of projects include the construction of four floodwater retention basins, including Basin BJ, Basin BJB, the Melrose Drive Basin and the Faraday Avenue basin, and the dredging and/or improvement of the Agua Hedionda and Calavera Creek channels.

<u>Purpose</u>	Estimated Cost	Funding Source
Total Cost	\$2,536,449	PLDA "B"
Total Cost =	\$2,536,449	

<u>DRAINAGE PROJECTS - CYNTHIA LANE STORM DRAIN</u>

6601 PROJECT NO.

PROJECT NAME



PROJECT LOCATION:

Cynthia Lane

PROJECT DESCRIPTION:

Replace existing 18" CMP with a new 24" RCP.

PROJECT NEED:

The current drainage system is old and insufficient to convey peak storm runoff.

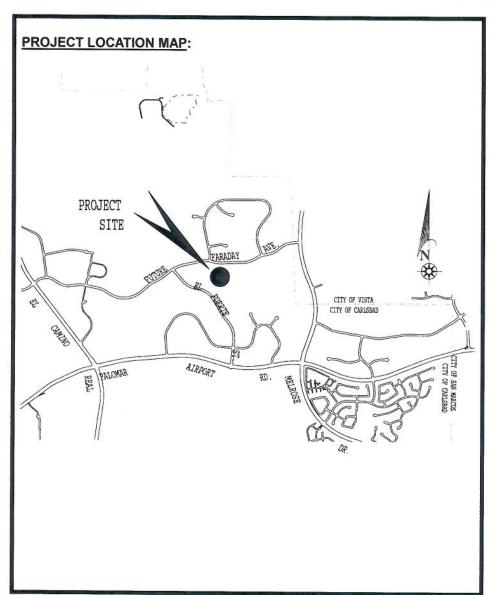
<u>Purpose</u>	Estimated Cost	Funding Source
Environmental	\$5,000	IRF
Design	\$25,000	IRF
Construction	\$188,750	IRF
Admin/Inspection	\$35,000	IRF
Total Cost =	\$253,750	

3622

<u>DRAINAGE PROJECTS – FARADAY/MELROSE DRAINAGE FACILITIES</u>

PROJECT NO.

PROJECT NAME



PROJECT LOCATION:

Within Faraday Avenue at the crossing of La Mirada Creek which drains the upstream properties and is tributary to Agua Hedionda Creek.

PROJECT DESCRIPTION:

Construction of a 49 acre foot floodwater retention facility including a reinforced concrete box culvert beneath Faraday Avenue.

PROJECT NEED:

This project is one of a series of projects designed to help reduce flooding along the Agua Hedionda Creek especially within the RCMHP community. The series of projects include the construction of four floodwater retention basins, including Basin BJ, Basin BJB, the Melrose Drive Basin and the Faraday Avenue basin, and the dredging and/or improvement of the Agua Hedionda and Calavera Creek channels.

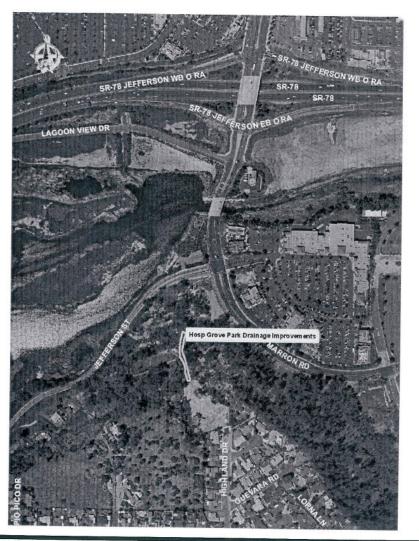
<u>Purpose</u>	Estimated Cost	Funding Source
Design/Construction	\$325,000	PLDA "B"
Total Cost =	\$325,000	

<u>DRAINAGE PROJECTS – HOSP GROVE PARK DRAINAGE IMPROVEMENTS</u>

NONE PROJECT NO.

PROJECT NAME

PROJECT LOCATION MAP:



PROJECT LOCATION:

Hosp Grove Park

PROJECT DESCRIPTION:

Replace the existing deteriorated storm drain maintenance access roadway and provide localized erosion control methods.

PROJECT NEED:

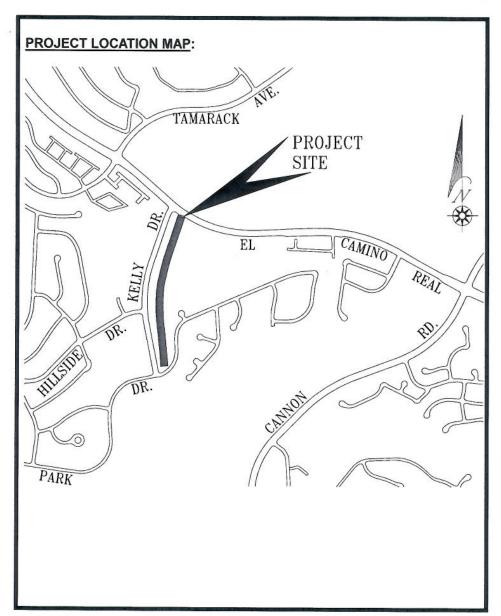
The maintenance access roadway provides access to recently constructed storm drain facilities from Highland Avenue and also serves as the drainage course for the storm drain flow. The project proposes the replacement of the existing AC access roadway with a durable concrete access/drainage roadway. The project also includes the installation of large rocks in spot locations to reduce downstream erosion caused by the drainage flows.

Purpose	Estimated Cost	Funding Source
Design	\$20,000	IRF
Construction	\$130,000	IRF
Total Cost =	\$150,000	

<u>DRAINAGE PROJECTS – KELLY DRIVE CHANNEL REPAIR</u>

6606 PROJECT NO.

PROJECT NAME



PROJECT LOCATION:

Parallel to Kelly Drive east of Hillside Drive and behind the row of homes on the south side of Kelly Drive.

PROJECT DESCRIPTION:

Reconstruct 260' of a concrete lined trapezoidal channel and 780' of concrete slope protection.

PROJECT NEED:

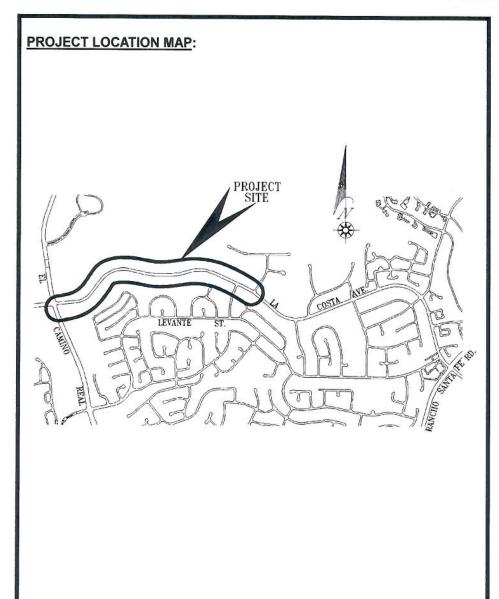
This portion of the existing concrete channel lining is breaking apart and the underlying earth is being eroded. The erosion is undermining the remaining channel and adjacent property/backyards.

Purpose	Estimated Cost	Funding Source
Study/Design	\$263,000	IRF
Environmental	\$151,000	IRF
Construction	\$619,500	IRF
Admin/Inspection	\$125,000	IRF
Total Cost =	\$1,158,500	

PROJECT NO.

<u>DRAINAGE PROJECTS – LA COSTA AVENUE STORM DRAIN REPLACEMENTS</u>

PROJECT NAME



PROJECT LOCATION:

Various locations on La Costa Avenue east of El Camino Real.

PROJECT DESCRIPTION:

Replace old corrugated metal storm drains with reinforced concrete pipe at various locations along La Costa Avenue east of El Camino Real.

PROJECT NEED:

Existing corrugated metal storm drains are in very poor condition and need to be replaced in order to maintain adequate drainage.

<u>Purpose</u>	Estimated Cost	Funding Source
Design	\$50,000	IRF
Construction	\$378,000	IRF
Admin/Inspection	\$64,150	IRF
Total Cost =	\$492,150	

<u>DRAINAGE PROJECTS - MASTER DRAINAGE PLAN UPDATE</u>

3872 PROJECT NO.

PROJECT NAME

PROJECT LOCATION

VARIOUS LOCATIONS OF THE CITY

PROJECT LOCATION:

Throughout the City.

PROJECT DESCRIPTION:

Update the City's Master Drainage Plan (MDP) based on current growth projections, new Federal storm water quality permit requirements, the City's Habitat Management Plan (HMP) and construction and environmental mitigation cost increases. Also included is the cost to prepare and process an environmental impact report for the updated MDP.

PROJECT NEED:

The MDP update will help identify the need for changes to planned facilities based on the timing of growth projections and NPDES requirements. The City's MDP was last updated in 1994. Since 1994, there have been several changes to the City's growth patterns due to the HMP and HCP that impact growth projections and densities in various areas of the City. This Master Plan is necessary for identifying the facilities needed to meet Growth Management Standards.

<u>Purpose</u>	Estimated Cost	Funding Source
Studies/Reports	\$494,933	PLDA
Total Cost =	\$494,933	

<u>DRAINAGE PROJECTS - MISCELLANEOUS MASTER DRAINAGE FACILITIES</u> PROJECT NAME

NONE PROJECT NO.

PROJECT LOCATION MAP:	
VARIOUS LOCATIONS THROUGHOUT THE CITY	

PROJECT LOCATION:

Various locations throughout the City.

PROJECT DESCRIPTION:

Construction of various major storm drain facilities within the City. The facilities funded through this program are outlined in the Master Drainage and Storm Water Management Plan.

PROJECT NEED:

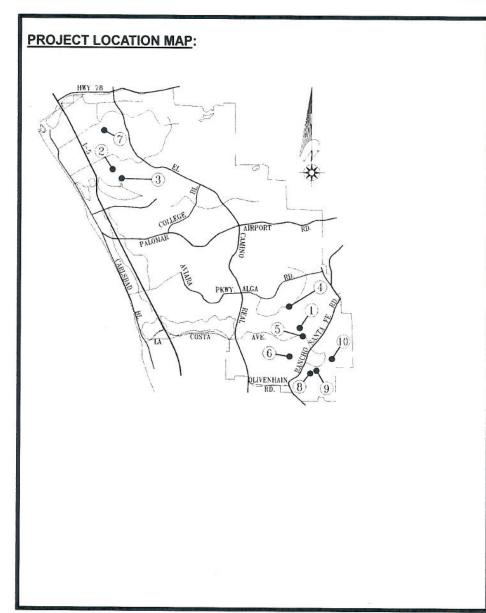
Required to meet Growth Management Standards and identified in the Master Drainage and Storm Water Quality Management Plan.

<u>Purpose</u>	Estimated Cost	Funding Source		
Design/Construction	\$11,318,800	PLDA Fees		
Total Cost =	\$11,318,800			

DRAINAGE PROJECTS - MISCELLANEOUS ROAD SUBDRAINS

3681 PROJECT NO.

PROJECT NAME



PROJECT LOCATION:

Nine locations throughout Carlsbad:

- Carlina & Hataca Road
- 6. Quebrada Circle

Calavo Court

- 7. Linda Lane
- Park Drive & Cove
- Avenida Nieve
- 4. Alicante & Corte De La Vista
- 9. Circulo Adorno
- 5. La Costa Avenue & Cadencia
- 10. Calle Gavanzo (east side)

PROJECT DESCRIPTION:

Preparation of an engineering study report investigating the potential causes and remedies for various surface/subsurface drainage problems occurring at the various street locations listed above. Repairs will be made to the extent funding is available. Additional funding requests will be made after more detailed cost estimates are prepared in the study report.

PROJECT NEED:

Based upon citizen request and maintenance staff requests.

- Save maintenance dollars
- Mitigates hazards from
 Relieve health hazards Mitigates hazards from slip and falls

<u>Purpose</u>	Estimated Cost	Funding Source		
Design/Construction	\$560,000	Gas Tax		
Total Cost =	\$560.000			

6608 PROJECT NO.

<u>DRAINAGE PROJECTS – NW QUADRANT STORM DRAIN IMPROVEMENT PROGRAM</u>

PROJECT NAME

P	R	0	J	E	C.	Г	L	0	C	A	TI	0	N	M	AP	:

VARIOUS LOCATIONS IN NW QUADRANT OF THE CITY

PROJECT LOCATION:

Various locations in the NW Quadrant of the City.

PROJECT DESCRIPTION:

Construct missing sections of the NW Quadrant storm drain system.

PROJECT NEED:

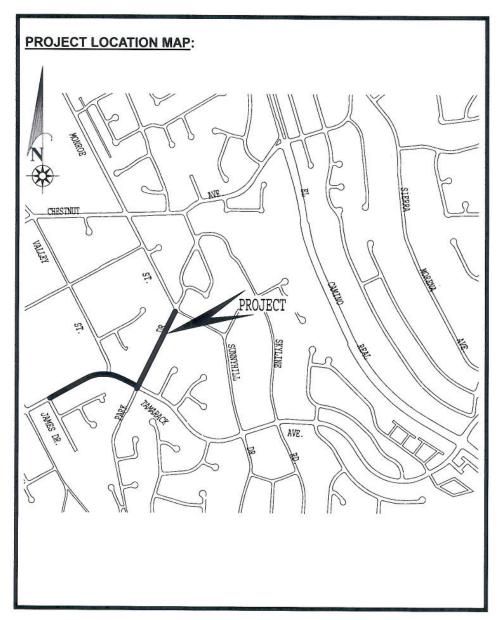
In the infill portion of the City, older roadways were constructed without the proper storm drain improvements. The project would construct missing storm drain pipelines so the runoff is collected and transported through a complete underground drainage system.

Purpose	Estimated Cost	Funding Source
Design/Construction Design/Construction	\$460,205 \$2,862,095	GCC Gas Tax
Total Cost =	\$3,322,300	

NONE PROJECT NO.

DRAINAGE PROJECTS - PARK DRIVE AND TAMARACK AVENUE STORM DRAIN

PROJECT NAME



PROJECT LOCATION:

Along Park Drive from Monroe Street to Tamarack Avenue and along Tamarack Avenue from Park Drive to James Drive.

PROJECT DESCRIPTION:

Installation of approximately 2,100 linear feet of 24-inch diameter reinforced concrete storm drain pipe including access holes and other appurtenances. Identified within the Master Drainage Plan as facility "BCA".

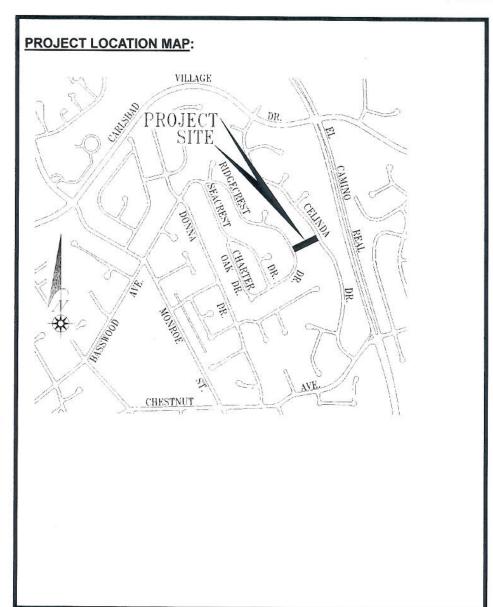
PROJECT NEED:

Required to prevent flooding of properties west of Park Drive and north of Tamarack Avenue. The development of a proposed new subdivision east of Park Drive between Tamarack Avenue and Monroe Street will add the existing drainage and create a greater need for this master planned drainage facility.

<u>Purpose</u>	Estimated Cost	Funding Source
Planning/Study	\$100,000	PLDA "B"
Construction	\$531,400	PLDA "B"
Total Cost =	\$631,400	

DRAINAGE PROJECTS – RIDGECREST DRAINAGE IMPROVEMENT
PROJECT NAME

6603 PROJECT NO.



PROJECT LOCATION:

3500 block of Ridgecrest Drive.

PROJECT DESCRIPTION:

Replace the existing corroded CMP pipe.

PROJECT NEED:

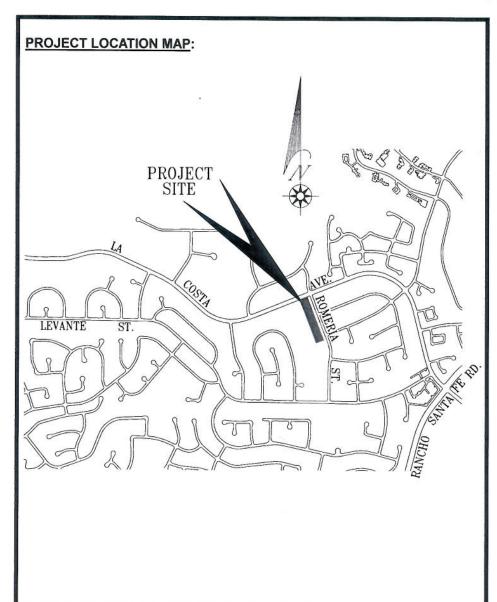
The existing inlet at the low point in this road clogs during storm events. The project would replace a potentially collapsed CMP in slope between Ridgecrest Drive and Celinda Drive.

Purpose	Estimated Cost	Funding Source
Study/Design	\$21,000	GCC
Construction	\$80,500	GCC
Admin/Inspection	\$16,000	GCC
Total Cost =	\$117,500	

<u>DRAINAGE PROJECTS – ROMERIA STREET DRAINAGE IMPROVEMENT</u>

6604 PROJECT NO.

PROJECT NAME



PROJECT LOCATION:

Behind properties on Romeria Street.

PROJECT DESCRIPTION:

Replace approximately 400 linear feet of existing trapezoidal channel and 200 linear feet of tributary ditches. H&H study is recommended to verify channel size and adequacy of culvert under La Costa Avenue.

PROJECT NEED:

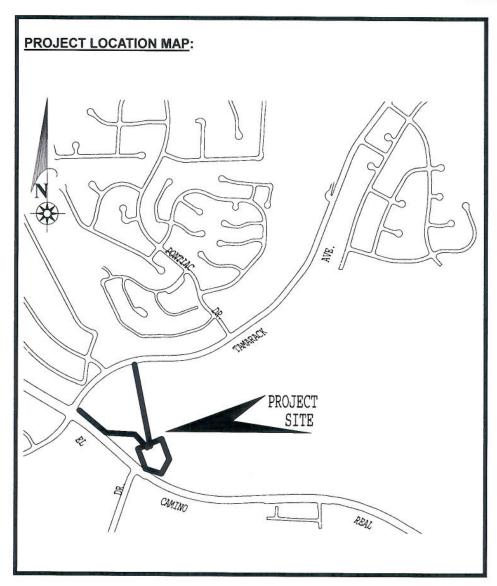
The existing channel is badly damaged with various sinkholes which poses a safety problem.

Purpose	Estimated Cost	Funding Source
Study	\$30,000	GCC
Design	\$20,000	GCC
Environmental	\$10,000	GCC
Construction	\$174,000	GCC
Construction	\$338,000	Gas Tax
Admin/Inspection	\$40,000	GCC
Total Cost =	\$612,000	

NONE PROJECT NO.

<u>DRAINAGE PROJECTS - TAMARACK AND EL CAMINO REAL</u> <u>STORM DRAIN AND SILTATION BASIN</u>

PROJECT NAME



PROJECT LOCATION:

At the southeast corner of Tamarack Avenue and El Camino Real.

PROJECT DESCRIPTION:

Reimbursement for the construction of a 45-inch and 75-inch storm drainage system together with appurtenant inlets, access holes and outlet structures. Project also includes the installation of an approximate 32,000 cubic yard siltation basin. The project facilities are identified as facilities "BF", "BFB" and Basin "BF1".

PROJECT NEED:

The Robertson Ranch property owners are currently processing a master plan for development of the Robertson Ranch project including the property at the southeast corner of Tamarack Avenue and El Camino Real. As a condition of development, the developer will be required to install the above-described Master Drainage Plan facilities. The cost of the facilities is expected to exceed the drainage fee obligation for the project, thus creating the potential need for reimbursement.

Estimated Cost	Funding Source
\$1,323,800	PLDA "B" Fees
\$1,323,800	
	\$1,323,800